Topic: Length of a line segment

Question: Upon what number does E lie?

Points A, B, C, D and E lie, in that order, on a number line.

C is on 0.

$AC = 5$, $BC = 3$, $BD = 7$ and $BE = 9$.

Answer choices:

A -4

B 2

C 5

D 6

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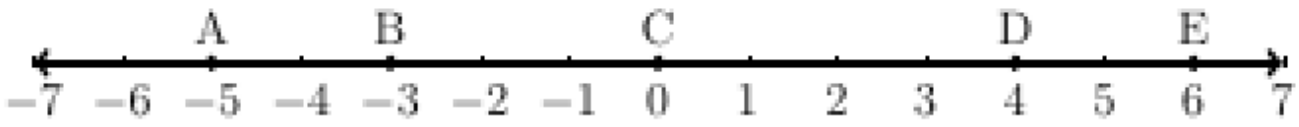
Solution: D

We know point C is on 0 and $BC = 3$.



This lets us locate point B on -3.

If B is on -3, and $BE = 9$, point E must be a distance of 9 to the right of -3.

That puts it at 6 .

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Topic: Length of a line segment

Question: Find the indicated value.

On a number line there are four points. What is $XZ - WY$?

W is on -4

X is on -2

Y is on 3

Z is on 6

Answer choices:

A 1

B 2

C 3

D 4

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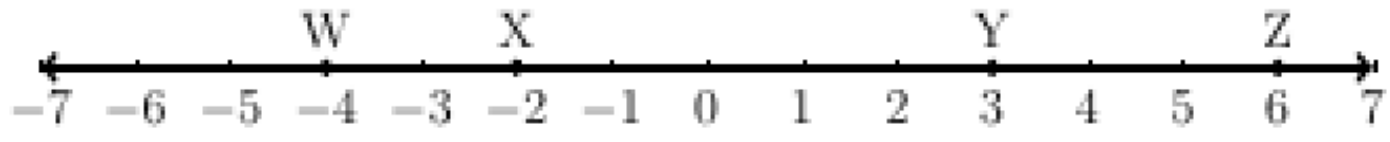
Solution: A

Let's plot the points we've been given onto the number line.



We can say that

$$XZ = |6 - (-2)| = 8$$

$$WY = |3 - (-4)| = 7$$

Therefore,

$$XZ - WY = 8 - 7 = 1$$

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Topic: Length of a line segment

Question: Find the indicated value.

Three points, N, P, and R lie on a line in that order. NP is 4 less than twice PR. If $NP = 2$, what is NR?

Answer choices:

A 5

B 4

C 3

D 6

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Solution: A

Let's sketch out what we know.

Now let $PR = x$.

NP is 4 less than twice PR, so $NP = 2x - 4$.

We also know that $NP = 2$, so we can write

$$2x - 4 = 2$$

$$2x = 6$$

$$x = 3$$

So $PR = 3$. Therefore,

$$NR = NP + PR$$

$$NR = 2 + 3$$

$$NR = 5$$

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